

## CLAIMS

1. A medical stent comprising:

a single-piece, extruded stent body which does not substantially soften when exposed to a temperature of a human body, at least a portion of the stent body sized for placement in a ureter and at least a section of the stent body defining holes therethrough, the stent body comprising:

    a first section defining a lumen and comprising a first coil completing at least one revolution, the first section comprising a first material having a first durometer value;

    a second section defining a lumen and comprising a second coil completing at least one revolution, the second section comprising a second material having a second durometer value, wherein the second durometer value is greater than the first durometer value; and

    a third section defining a lumen and located between the first and second sections, wherein the third section comprises a co-extrusion of the first and second materials that is disposed between the first coil and the second coil and wherein an outer surface of the third section smoothly transitions to outer surfaces of the first and second sections immediately proximate the third section and an inner diameter of the third section is substantially constant through the third section and on either side of the third section immediately proximate to the third section in the first and second sections.

2. The stent of claim 1 wherein the first material comprises ethylene vinyl acetate.
3. The stent of claim 1 wherein the first material has a durometer value of about 70 to about 90 on a Shore A scale.
4. The stent of claim 1 wherein the second material has a durometer value of about 80 to about 95 on a Shore A scale.
5. The stent of claim 1 wherein a cross-section of the lumen in at least one of the first, second, and third sections is circular.

6. The stent of claim 1 wherein a cross-section of at least one of the first, second, and third sections is circular.

7. The stent of claim 1 wherein at least one of the first, second, and third section comprises a radiopaque material.

8. A medical stent comprising:

a single-piece, extruded stent body which does not substantially soften when exposed to a temperature of a human body, at least a portion of the stent body sized for placement in a ureter and at least a section of the stent body defining holes therethrough, the stent body comprising:

a first section defining a lumen and comprising a first coil completing at least one revolution, the first section comprising a first material and the first coil having a first retention strength;

a second section defining a lumen and comprising a second coil completing at least one revolution, the second section comprising a second material and the second coil having a second retention strength, wherein the second retention strength is greater than the first retention strength; and

a third section defining a lumen and located between the first and second sections, wherein the third section comprises a co-extrusion of the first and second materials that is disposed between the first coil and the second coil and wherein an outer surface of the third section smoothly transitions to outer surfaces of the first and second sections immediately proximate the third section and an inner diameter of the third section is substantially constant through the third section and on either side of the third section immediately proximate to the third section in the first and second sections.

9. A method for placing a medical stent comprising:

inserting a medical stent into a ureter, the medical stent comprising:

a single-piece, extruded stent body which does not substantially soften when exposed to a temperature of a human body, at least a portion of the stent body sized for placement in a ureter and at least a section of the stent body defining holes therethrough, the stent body comprising:

a first section defining a lumen and comprising a first coil completing at least one revolution, the first section comprising a first material having a first durometer value;

a second section defining a lumen and comprising a second coil completing at least one revolution, the second section comprising a second material having a second durometer value, wherein the second durometer value is greater than the first durometer value; and

a third section defining a lumen and located between the first and second sections, wherein the third section comprises a co-extrusion of the first and second materials that is disposed between the first coil and the second coil and wherein an outer surface of the third section smoothly transitions to outer surfaces of the first and second sections immediately proximate the third section and an inner diameter of the third section is substantially constant through the third section and on either side of the third section immediately proximate to the third section in the first and second sections.